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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BAYARD, DIJENANE M

ART UNIT PAPER NUMBER

2141

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/784,722

Applicant(s)

TANG ET AL.

Examiner

Djenane M Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,243,373 to Veerina et al in view of U.S. Patent No. U.S. Patent No. 6,735,190 to Chuah et al

a. As per claim 1, Veerina et al teaches a method for multiplexing data packets comprising steps of: receiving a plurality of data packets to produce a plurality of received data packets, received data packet of the plurality of received data packets comprises a routing address (See col. 1, lines 59-65) and multiplexing the modified data packets (See col. 3, lines 39-47). However, Veerina et al fails to teach wherein each determining a address label for each received data packet based on the data packet's routing address; adding the address label determined for each received data packet to the data packet to produce a modified data packet;

Chuah et al teaches a packet communication apparatus provided with manager means for managing packet labels. Furthermore, Chuah et al teaches wherein each determining a address label for each received data packet based on the data packet's

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routing address (See col. 8, lines 8-16); adding the address label determined for each received data packet to the data packet to produce a modified data packet (See col. 2, lines 38-45);

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein each received data packet of the plurality of received data packets comprises a routing address; determining a address label for each received data packet based on the data packet's routing address; adding the address label determined for each received data packet to the data packet to produce a modified data packet as taught by Chuah et al in the claimed invention of Veerina et al in order to provide more efficient data packet transport (See col. 2, lines 23-25).

b. As per claim 2, Veerina et al in view of Chuah et al teaches the claimed invention as described above. However, Veerina et al fails to teach deleting each received data packet's routing address from the data packet.

Chuah et al teaches deleting each received data packet's routing address from the data packet (See col. 2, lines 38-39)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate deleting each received data packet's routing address from the data packet as taught by Chuah et al in the claimed invention of Veerina et al in order to reduce overhead (See col. 2, lines 26-27).

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c. AS per claim 3, Veerina et al in view of Chuah et al teaches the claimed invention as described above. However, Veerina et al fails to teach adding a new data transmission header to the multiplexed data packets.

Chuah et al teaches adding a new data transmission header to the data packets (See col. 2, lines 39-45).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate adding a new data transmission header to the multiplexed data packets as taught by Hanaoka et al in the claimed invention of Veerina et al in order to provide increase efficiency (See col. 1, line7-9).

d. As per claim 4, Veerina et al in view of Chuah et al teaches the claimed invention as described above. However, Veerina et al fail to teach wherein the data transmission header comprises a transport layer header.

Chuah et al teaches wherein the data transmission header comprises a transport layer header (See col. 1, lines 27-38)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the data transmission header comprises a transport layer header as taught by Chuah et al in the claimed invention of Veerina et al in order to improve the capacity of the router (See col. 1, lines 45-46).

e. As per claim 5, Veerina et al in view of Chuah et al teaches the claimed invention as described above. However, Veerina et al fail to teach wherein the data transmission header comprises a multi-protocol address label switching (MPLS) header.

Chuah et al teaches wherein the data transmission header comprises a multi-protocol address label switching (MPLS) header (See col. 6, lines 56-57)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein the data transmission header comprises a multi-protocol address label switching (MPLS) header as taught by Chuah et al in the claimed invention of Veerina et al in order to convert the network layer packet into labeled packet (See col. 6, lines 57-58).

f. As per claim 6, Veerina et al in view of Chuah et al teaches the claimed invention as described above. However, Veerina et al fail to teach routing the multiplexed data packets based on the added data transmission header.

Chuah et al teaches routing the multiplexed data packets based on the added data transmission header (See col. 2, lines 46-49).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate routing the multiplexed data packets based on the added data transmission header as taught by Chuah et al in the claimed invention of Veerina et al in order to convert the network layer packet into labeled packet (See col. 6, lines 57-58).

g. As per claim 8, Veerina et al in view of Chuah et al teaches the claimed invention as described above. However, Veerina et al fail to teach creating a connection table that comprises the routing address of each received data packet and the address label corresponding to each routing address.

Chuah et al teaches creating a connection table that comprises the routing address of each received data packet and the address label corresponding to each routing address (See col. 10, lines 1-30)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate creating a connection table that comprises the routing address of each received data packet and the address label corresponding to each routing address as taught by Chuah et al in the claimed invention of Veerina et al in order to establish a labeled flow (See abstract).

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent U.S. Patent No. 6,243,373 to Veerina et al. in view of No. 6,735,190 to Chuah et al as applied to claim 1 above, and further in view of U.S. Patent No. 5,991,300 to Tappan

a. As per claim 7, Veerina et al in view of Chuah teaches the claimed invention as described above. However, Veerina et al in view of Chuah fails to teach wherein a received data packet of the plurality of received data packets is formatted based on a different data transmission protocol than another received data packet of the plurality of received data packets.

Tappan et al teaches wherein a received data packet of the plurality of received data packets is formatted based on a different data transmission protocol than another received data packet of the plurality of received data packets (See col. 1, lines 50-53)



It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein a received data packet of the plurality of received data packets is formatted based on a different data transmission protocol than another received data packet of the plurality of received data packets as taught by Tappan et al in the claimed invention of Veerina et al in view of Chuah in order to determine how to forward the datagram to its ultimate destination (See col. 1, lines 56-58).

4. Claims 9-11, 13-15, 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,735,190 to Chuah et al in view of U.S. Patent No. 6,243,373 to Veerina et al.

a. As per claim 9, Chuah et al teaches a method for point-to-point transmission of data comprising steps of: receiving, by a data transmitting device, a plurality of data packets to produce a plurality of received data packets, wherein each received data packet of the plurality of received data packets comprises a routing address (See col. 4, lines 25-30, Remarks: the network is comprised of routers); determining, by the data transmitting device, a address label for each received data packet based on the data packet's routing address (See col. 1, lines 45-47); adding, by the data transmitting device, the address label determined for each received data packet to the data packet to produce a modified data packet (See col. 2, lines 39-45); adding, by the data transmitting device, a data transmission header to the data packets to produce a data transmission unit (See col. 5, lines 23-40); and transmitting, by the data transmitting device, the data transmission unit

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to a data receiving device (See col. 2, lines 19-21). However, Chuah et al fails to teach multiplexing the modified data packets.

Veerina et al teaches a connection and packet level multiplexing between network links. Furthermore, Veerina et al teaches a connection and packet level multiplexing between network links (See col. 2, lines 10-20).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate a connection and packet level multiplexing between network links as taught by Veerina et al in the claimed invention of Chuah et al in order to connect multiple links between networked computer (See col. 1, lines 6-9).

b. As per claim 18, Chuah et al teaches a data transmitting device for transmitting multiplexed data packets, the data transmitting device comprising: a receiving unit that receives a plurality of data packets to produce a plurality of received data packets, wherein each received data packet of the plurality of received data packets comprises a routing address (See col. 4, lines 25-30, Remarks: the network is comprised of routers); a processor coupled to the data receiving unit that determines a address label for each received data packet based on the data packet's routing address (See col. 1, lines 45-47), adds the address label determined for each received data packet to the data packet to produce a modified data packet (See col. 5, lines 23-40), and a transmitting unit coupled to the processor that transmits the data packets (See col. 2, lines 19-21). However, Chuah et al fails to teach multiplexing the modified data packets.

Veerina et al teaches a connection and packet level multiplexing between network links (See col. 2, lines 10-20).

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It would have been obvious to one with ordinary skill in the art at the time this invention was made to incorporate a connection and packet level multiplexing between network links as taught by Veerina et al in the claimed invention of Chuah et al in order to connect multiple links between networked computer (See col. 1, lines 6-9).

c. As per claim 10 and 19, Chuah et al teaches deleting, by the data transmitting device, each received data packet's destination address from the data packet (See col. 2, lines 38-39).

d. As per claim 11, Chuah et al teaches receiving the data transmission unit by the data receiving device; extracting, by the data receiving device, the modified data packets from the data transmission unit; and routing, by the data receiving device, each modified data packet based on the routing address corresponding to the data packet's address label (See col. 2, lines 39-45).

e. As per claim 13, Chuah et al teaches a step of creating a connection table that comprises the routing address of each received data packet and the address label corresponding to each routing address (See col. 10, lines 1-30).

f. As per claims 14 and 22, Chuah et al teaches wherein the connection table is created by the data transmitting device and conveyed by the data transmitting device to the data receiving device (See col. 10, lines 5-30)

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g. As per claim 15, Chuah et al teaches routing each modified data packet comprises a step of routing, by the data receiving device, each modified data packet by reference to the connection table (See col. 10, lines 1-30)

i. As per claim 20, Chuah et al teaches wherein the processor further determines a data transmission header for the multiplexed data packets and adds the data transmission header to the multiplexed data packets (See col. 2, lines 39-45).

j. As per claim 21, Chuah et al teaches wherein the processor further creates a connection table that comprises the routing address of each received data packet and the address label corresponding to each routing address (See col. 10, lines 1-30).

5. Claims 12, 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,735,190 to Chuah et al in view of U.S. Patent No. 6,243,373 to Veerina et al. as applied to claim 9 above, and further in view of U.S. Patent No. 5,991,300 to Tappan

a. As per claim 12, Chuah et al teaches deleting, by the data receiving device, the address label from each modified data packet. However, Chuah et al fails to teach adding, by the data receiving device to each modified data packet, the routing address corresponding to the modified data packet's address label.

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Tappan teaches adding, by the data receiving device to each modified data packet, the routing address corresponding to the modified data packet's address label (See col. 7, lines 1-25).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate adding, by the data receiving device to each modified data packet, the routing address corresponding to the modified data packet's address label as taught by Tappan et al in the claimed invention of Chuah et al in view of Veerina et al in order to relieve the router of the need to perform an expensive long match-search (See col. 2, lines 45-46)

b. As per claim 16, Chuah et al in view of Veerina et al teaches the claimed invention as described above. However, Chuah et al in view of Veerina fails to teach wherein a received data packet of the plurality of received data packets is formatted based on a different data transmission protocol than another received data packet of the plurality of received data packets.

Tappan et al teaches wherein a received data packet of the plurality of received data packets is formatted based on a different data transmission protocol than another received data packet of the plurality of received data packets (See col. 1, lines 50-53)

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate wherein a received data packet of the plurality of received data packets is formatted based on a different data transmission protocol than another received data packet of the plurality of received data packets as taught by Tappan et al in the claimed invention of Chuah et al in view of Veerina in order to

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determine how to forward the datagram to its ultimate destination (See col. 1, lines 56-58).

c. As per claim 17, Chuah et al in view of Veerina et al teaches the claimed invention as described above. However, Chuah et al in view of Veerina fails to teach receiving a data transmission unit; determining a routing address of each modified data packet included in the data transmission unit based on the modified data packet's address label; and forwarding each modified data packet based on the determined routing address.

Tappan teaches receiving a data transmission unit; determining a routing address of each modified data packet included in the data transmission unit based on the modified data packet's address label; and forwarding each modified data packet based on the determined routing address (See col. 7, lines 1-25).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate receiving a data transmission unit; determining a routing address of each modified data packet included in the data transmission unit based on the modified data packet's address label; and forwarding each modified data packet based on the determined routing address as taught by Tappan et al in the claimed invention of Chuah et al in view of Veerina et al in order to relieve the router of the need to perform an expensive long match-search (See col. 2, lines 45-46)

6. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,991,300 to Tappan in view of U.S. Patent No. 6,243,379 to Veerina et al.

a. As per claim 23, Tappan teaches a data receiving device for receiving a data transmission unit comprising a plurality of multiplexed data packets, wherein each data packet of the multiplexed data packets comprises an address label (See col. 6, lines 25-33), the data receiving device comprising: a receiving unit that receives the data transmission unit; and a processor coupled to the receiving unit that extracts a plurality of data packets from the data transmission unit, determines a routing address for each data packet of the plurality of data packets based on the address label, and routes each data packet based on the data packet's determined routing address (See col. 7, lines 1-25). However, Tappan et al fails to teach multiplexing the modified data packets.

Veerina et al teaches a connection and packet level multiplexing between network links (See col. 2, lines 10-20).

It would have been obvious to one with ordinary skill in the art at the time this invention was made to incorporate a connection and packet level multiplexing between network links as taught by Veerina et al in the claimed invention of Chuah et al in order to connect multiple links between networked computer (See col. 1, lines 6-9).

b. As per claim 24, Tappan teaches a memory coupled to the processor that stores a connection table comprising at least one address label and a routing address corresponding to the at least one address label, and wherein the processor determines a routing address for each data packet by reference to the connection table (See col. 2, lines 45-53).

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c. As per claim 25, Tappan teaches wherein the data transmission unit further comprises a data transmission header corresponding to the data receiving device (See col. 2, lines 47-48).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,374,303 to Armitage et al teaches an explicit rout and multicast tree setup label distribution.

U.S. Patent No. 6,584,103 to Hanaoka et al teaches a packet communication apparatus provided with manger means for managing packet labels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Djenane M Bayard whose telephone number is (703) 305-6606. The examiner can normally be reached on 7:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Djenane Bayard

June 24, 2004



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